

**Commonwealth of Kentucky  
Environmental and Public Protection Cabinet  
Department for Environmental Protection  
Division for Air Quality  
803 Schenkel Lane  
Frankfort, Kentucky 40601  
(502) 573-3382**

**Final**

**AIR QUALITY PERMIT  
Issued under 401 KAR 52:030**

**Permittee Name:** Kentucky 5 Star Energy, LLC  
**Mailing Address:** 14890 US Highway 41 South, P.O. Box 189,  
Robards, KY 42452

**Source Name:** Kentucky 5 Star Energy, LLC  
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Robards, KY 42452

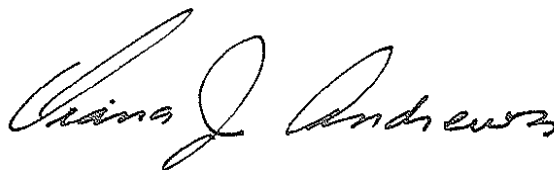
**Source Location:** Near Sebree, Kentucky (See above)

**Permit ID:** F-07-025  
**Agency Interest #:** 84701  
**Activity ID:** APE20070001  
**Review Type:** Conditional Major / Synthetic Minor,  
Construction / Operating  
**Source ID:** 21-101-00139

**Regional Office:** Owensboro Regional Office  
3032 Alvey Park Dr. W., Suite 700  
Owensboro, KY 42303  
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**County:** Henderson

**Application**  
**Complete Date:** June 1, 2007  
**Issuance Date:** September 6, 2007  
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**John S. Lyons, Director  
Division for Air Quality**

## TABLE OF CONTENTS

SECTION	ISSUANCE	PAGE
A. PERMIT AUTHORIZATION		1
B. EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Initial	2
C. INSIGNIFICANT ACTIVITIES	Initial	26
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Initial	30
E. SOURCE CONTROL EQUIPMENT REQUIREMENTS	Initial	32
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Initial	33
G. GENERAL PROVISIONS	Initial	36
H. ALTERNATE OPERATING SCENARIOS	Initial	42
I. COMPLIANCE SCHEDULE	Initial	42
J. ACID RAIN	Initial	42

	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
<b>F-07-025</b>	<b>Initial Issuance</b>	<b>APE20070001</b>	<b>6/1/07</b>	<b>9/6/07</b>	<b>Initial Construction Permit</b>

## **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:030, Federally-enforceable permits for non-major sources.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS****Emission Point SV01 - Grain Receiving****Emission Point SV02, SV03, and SV04 - Grain Storage****Emission Point SV05 - Grain Handling****Emission Point SV06 and SV07 - Grain Hammermilling****Emission Point SV08 - Fermentation****Emission Point SV09 - Distillation****Emission Point SV10 - DDGS Drying / Ethanol Loadout****Emission Point SV11 - DDGS Handling****Emission Point SV12 and SV13 - DDGS Loadout****Description:**

<b>Emission Point SV01 - Grain Receiving</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU01	Truck Dump Pit	560 tons/hr 629,214 tons/yr	Grain Receiving Baghouse
EU02	Rail Dump Pit		
EU03	Corn Conveyor #1		
EU04	Corn Elevator #1		
EU05	Corn Conveyor #2		
EU06	Corn Elevator #2		
EU07	Scalper		

<b>Emission Point SV02 - Grain Storage</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU08	Corn Bin #1	560 tons/hr 629,214 tons/yr	Corn Bin #1 Vent Filter

<b>Emission Point SV03 - Grain Storage</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU09	Corn Bin #2	560 tons/hr 629,214 tons/yr	Corn Bin #2 Vent Filter

<b>Emission Point SV04 - Grain Storage</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU10	Corn Bin #3	560 tons/hr 629,214 tons/yr	Corn Bin #3 Vent Filter

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

<b>Emission Point SV05 - Grain Handling</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU11	Surge Bin	560 tons/hr 629,214 tons/yr	Surge Bin Vent Filter

<b>Emission Point SV06 - Grain Hammermilling</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU12	Corn Conveyor #3	36 tons/hr 315,360 tons/yr	Hammermilling Baghouse #1
EU13	Corn Elevator #3		
EU14	Hammermill #1		

<b>Emission Point SV07 - Grain Hammermilling</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU15	Corn Conveyor #4	36 tons/hr 315,360 tons/yr	Hammermilling Baghouse #2
EU16	Corn Elevator #4		
EU17	Hammermill #2		

<b>Emission Point SV08 - Fermentation</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU18	Yeast Tank	6,850 gallons/hr 60,000,000 gallons/yr	Fermentation CO <sub>2</sub> Scrubber
EU19	Fermenter #1		
EU20	Fermenter #2		
EU21	Fermenter #3		
EU22	Fermenter #4		
EU23	Beerwell		

<b>Emission Point SV09 - Distillation</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU24	Slurry Tank	6,850 gallons/hr 60,000,000 gallons/yr	Vent Gas Scrubber
EU25	Liquefaction Tank		
EU26	Beer Column		
EU27	Side Stripper		

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

EU28	Rectifier Column		
EU29	Molecular Sieve #1		
EU30	Molecular Sieve #2		
EU31	Process Condensate Tank		
EU32	Evaporator		
EU33	Whole Stillage Tank		
EU34	Thin Stillage Tank		
EU35	Centrifuge #1		
EU36	Centrifuge #2		
EU37	Centrifuge #3		
EU38	Centrifuge #4		
EU39	Syrup Tank		
EU40	200 Proof Condenser		

<b>Emission Point SV10 - DDGS Drying / Ethanol Loadout</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU41	DDGS Dryer	22.45 tons/hr 196,629 tons/yr	RTO
EU42	DDGS Cooler		
EU43	Ethanol Loadout (Truck)		
EU44	Ethanol Loadout (Rail)		
EU45	RTO		

<b>Emission Point SV11 - DDGS Handling</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU46	DDGS Conveyor	55 tons/hr 196,629 tons/yr	DDGS Handling Baghouse

<b>Emission Point SV12 - DDGS Loadout</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU47	DDGS Truck Loadout	55 tons/hr 196,629 tons/yr	DDGS Handling Baghouse #1

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Emission Point SV13 - DDGS Loadout		Maximum Rated Capacity	Control Device
EU48	DDGS Rail Loadout	100 tons/hr 196,629 tons/yr	DDGS Handling Baghouse #2

**APPLICABLE REGULATIONS:**

401 KAR 59:010, *New process operations*, is applicable to an emissions unit commenced on or after July 2, 1975.

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, is applicable to an emissions unit which emits or may emit potentially hazardous matter or toxic substances, provided such emissions are not elsewhere subject to the provisions of the administrative regulations of the Division for Air Quality.

**1. Operating Limitations:**

Refer to Section D for source-wide limits and compliance demonstration methods.

**2. Emission Limitations:**

- a. Particulate matter emissions from each stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

- b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute average.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Compliance Demonstration Method:**

- a. The following table of emissions factors shall be used to show compliance with the PM emission limit:

<b>Emission Point #</b>	<b>Emission Factor (lbs PM or PM<sub>10</sub> / ton)</b>	<b>Control Efficiency (%)</b>
SV01	0.4592	99
SV02	0.0154	99
SV03	0.0154	99
SV04	0.0154	99
SV05	0.00615	99
SV06	1.427	99
SV07	1.427	99
SV10	1.505	80
SV11	0.3918	99
SV12	0.3118	99
SV13	0.2581	99

where, PM/PM<sub>10</sub> emissions in pound per hour = (monthly processing rate in tons / month) (1 month / hours of operating that month) (emission factor) (1 – control efficiency)

- b. For compliance with visible emissions limit, see Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements*.

**3. Testing Requirements:**

- a. The permittee shall determine the opacity of emissions from the stack using U.S. EPA Reference Method 9 if visible emissions from the stack are seen (not including condensed water vapor within the plume) during monitoring (Refer to Subsection 4.a, *Specific Monitoring Requirements*).



**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- b. The facility shall utilize the following source test methods to be performed within 180 days of startup for the CO<sub>2</sub> Scrubber.

Test Method	Parameter / Pollutant
USEPA Method 18	GC/FID analysis with on site testing required (acetaldehyde, acetic acid, acrolein, ethanol, formaldehyde, formic acid, lactic acid and methanol)
USEPA Method 25A	Determination of Total VOC Emissions
USEPA Method 9	Opacity

**4. Specific Monitoring Requirements:**

- a. The permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen (not including condensed water vapor within the plume), then the opacity shall be determined by Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated of control equipment for any necessary repairs.
- b. The permittee shall monitor the grain processed rate, fuel grade ethanol production rate, and hours of operation on a monthly basis for each emission unit.

**5. Specific Recordkeeping Requirements:**

The permittee shall retain records of the following:

- a. The tons of raw material throughput and hours of operation shall be maintained on a monthly basis from each emission unit.
- b. Weekly qualitative opacity readings from each stack.
- c. The opacity determined by Reference Method 9, when taken, and documentation of any repairs that were made due to any opacity reading, which exceeded the standard.
- d. A log showing the date of all routine or other maintenance, malfunction or repair of the CO<sub>2</sub> scrubber and baghouses, the nature of the action taken on such date and any corrective action or preventive measures taken.

**6. Specific Reporting Requirements:**

See Section F, Conditions 5, 6, 7, 8 and 9.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**7. Specific Control Equipment Operating Conditions:**

The CO<sub>2</sub> scrubber shall be operated in the range of temperature and flowrates specified by the manufacture for proper operation of the device.

**8. Alternate Operating Scenarios:**

None

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Point SV14 and SV15 - Boilers**

Fuel Used: Natural Gas

**Description:**

Emission Point SV14 - Boiler		Maximum Rated Capacity	Control Device
EU49	Boiler #1	92.4 mmBtu/hr	None

Emission Point SV15 - Boiler		Maximum Rated Capacity	Control Device
EU50	Boiler #2	92.4 mmBtu/hr	None

**APPLICABLE REGULATIONS:**

401 KAR 59:015, *New indirect heat exchangers*, is applicable to an emissions unit with a capacity of less than 250 mmBtu/hr which commenced on or after April 9, 1972.

40 CFR 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, is applicable to these boilers since each boiler for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 mmBtu/hr) or less, but greater than or equal to 2.9 MW (10 mmBtu/hr).

**1. Operating Limitations:**

None

**2. Emission Limitations:**

- a. Pursuant to KAR 59:015, particulate emissions shall not exceed 0.2817 lb/mmBtu for each boiler.
- b. Pursuant to 401 KAR 59:015, Section 4(2), emissions shall not exceed 20% opacity based on a six minute average.
- c. Pursuant to KAR 59:015, sulfur dioxide emissions shall not exceed 0.9058 lb/mmBtu for each boiler.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**Compliance Demonstration Method:**

While burning natural gas, this unit is considered to be in compliance with the PM, SO<sub>2</sub> and opacity standards.

**3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

See Section F, Conditions 5, 6, 7, 8 and 9.

**6. Specific Reporting Requirements:**

See Section F, Conditions 5, 6, 7, 8 and 9.

**7. Specific Control Equipment Operating Conditions:**

None

**8. Alternate Operating Scenarios:**

None

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Point SV16 - Emergency Generator**

Fuel Used: Diesel Fuel

**Description:**

<b>Emission Point SV16 - Emergency Generator</b>		<b>Maximum Rated Capacity</b>	<b>Control Device</b>
EU51	Emergency Generator #1	22.11 mmBtu/hr	None

**APPLICABLE REGULATIONS:**

40 CFR 60 Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, is applicable to the emergency generator that commence construction after July 11, 2005 and manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

**1. Operating Limitations:**

- a. Pursuant to 40 CFR 60.4211(e), emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under 40 CFR 60.4205 but not 40 CFR 60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.
- b. Pursuant to 40 CFR 60.4207(a), beginning October 1, 2007, the permittee shall only use diesel fuel that meets the requirements of 40 CFR 80.510(a).
- c. Pursuant to 40 CFR 60.4207(b), beginning October 1, 2010, the permittee shall only use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

**Compliance Demonstration Method:**

Refer to Subsection 4, *Specific Monitoring Requirements* and Subsection 5, *Specific Recordkeeping Requirements*.

## **SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

### **2. Emission Limitations:**

- a. Pursuant to 40 CFR 60.4202(d), beginning with the model year (2008), stationary compression ignition (CI) internal combustion engine (ICE) manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 of 40 CFR 60 Subpart IIII, for all pollutants, for the same model year and NFPA nameplate power.
- b. Pursuant to 40 CFR 60.4205(c), owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 of 40 CFR 60 Subpart IIII, for all pollutants.
- c. Pursuant to 40 CFR 60.4206, to assure compliance with the emission standards, owners and operators of stationary CI ICE must operate and maintain stationary CI ICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.
- d. Refer to Section D for source-wide limits and compliance demonstration methods.

### **Compliance Demonstration Method:**

For compliance, see Subsection 3, *Testing Requirements* and Subsection 4, *Specific Monitoring Requirements*.

### **3. Testing Requirements:**

- a. To satisfy the requirements for an initial performance test pursuant to 40 CFR 60.8, the permittee shall submit to the Division a copy of the manufacturer's certified emissions certificate supplied with the engine within 90 days of achieving maximum load but no later than 180 days after installation.
- b. The permittee shall determine the opacity of emissions from the stack using U.S. EPA Reference Method 9 if visible emissions from the stack are seen (not including condensed water vapor within the plume) during monitoring (Refer to Subsection 4.a, *Specific Monitoring Requirements*).

### **4. Specific Monitoring Requirements:**

- a. The permittee shall monitor the amount of diesel fuel consumed by the generator on a monthly basis.
- b. The permittee shall monitor the hours of operation on a monthly basis for the emission unit. Pursuant to 40 CFR 60.4209(a), the permittee shall install a non-resettable hour meter on each unit prior to the start-up on the unit's engine.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**5. Specific Recordkeeping Requirements:**

The permittee shall retain records of the following:

- a. A log showing the date of all routine or the nature of the action taken on such date and any corrective action or preventive measures taken.
- b. Total amount of diesel fuel consumed by the generator on a monthly basis and on a consecutive twelve (12) month total.
- c. The hours of operation of the generator on a monthly basis and on a consecutive twelve (12) month total.
- d. The manufacturer's certified emissions certificate, manufacturer's written operating instructions, and any procedures develop by the owner or operator that are approved by engine manufacturer, over the entire life of the engine.

**6. Specific Reporting Requirements:**

See Section F, Conditions 5, 6, 7, 8 and 9.

**7. Specific Control Equipment Operating Conditions:**

None

**8. Alternate Operating Scenarios:**

None

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Points - Tanks****Description:**

<b>Tank ID #</b>	<b>Contents</b>	<b>Capacity gallons (m<sup>3</sup>)</b>	<b>Vapor Pressure (kPa)</b>	<b>Roof Type</b>	<b>NSPS Kb Applicability</b>
TK001	200 Proof Ethanol Storage Tank	175,000 (662.4)	4.2	Internal Floating Roof	Yes, Part
TK002	200 Proof Ethanol Storage Tank	175,000 (662.4)	4.2	Internal Floating Roof	Yes, Part
TK003	Denaturant Storage Tank	63,320 (239.7)	34.1	Internal Floating Roof	Yes, Full
TK004	Denatured Ethanol Storage Tank	619,570 (2,345.3)	4.9	Internal Floating Roof	Yes, Part
TK005	Denatured Ethanol Storage Tank	619,570 (2,345.3)	4.9	Internal Floating Roof	Yes, Part

**APPLICABLE REGULATIONS:**

40 CFR 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*, is applicable to storage tanks since which storage vessel has a capacity greater than 75 cubic meters (19,812.9 gallon) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

**1. Operating Limitations:**

The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with the following: [40 CFR 60.112b(a)]

A fixed roof in combination with an internal floating roof meeting the following specifications:

- a. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during



**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

- b. Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
  - (1) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.
  - (2) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
  - (3) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
- c. Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
- d. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
- e. Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
- f. Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
- g. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
- h. Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- i. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

**Compliance Demonstration Method:**

For compliance with 40 CFR 60.112b(a), refer to Subsection 4. *Specific Monitoring Requirements*, Subsection 5. *Specific Recordkeeping Requirements*, and 6. *Specific Reporting Requirements*.

**2. Emission Limitations:**

None

**3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

After installing the control equipment required to meet 40 CFR 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall: [40 CFR 60.113b(a)]

- a. Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with volatile organic liquid (VOL). If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
- b. For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in 40 CFR 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- c. For vessels equipped with a double-seal system as specified in 40 CFR 60.112b(a)(1)(ii)(B):
  - (1) Visually inspect the vessel as specified in Subsection 4.d of this section at least every 5 years; or
  - (2) Visually inspect the vessel as specified in Subsection 4.b of this section.
- d. Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in Subsection 4.b and 4.c(2) of this section and at intervals no greater than 5 years in the case of vessels specified in Subsection 4.c(1) of this section.
- e. Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by Subsection 4.a and 4.d of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by Subsection 4.d of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

**5. Specific Recordkeeping Requirements:**

- a. Pursuant to 40 CFR 60.116b(a) and (b), the permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be maintained for the life of the vessel.
- b. Pursuant to 40 CFR 60.116b(c), the permitte shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- c. Pursuant to 40 CFR 60.115b(a)(2), the permitte shall keep a record of each inspection performed as required by 40 CFR 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**6. Specific Reporting Requirements:**

- a. Pursuant to 40 CFR 60.7(a)(1), the permittee shall furnish the Division with written notification of the date construction of the tank is commenced, postmarked no later than 30 days after such date.
- b. Pursuant to 40 CFR 60.7(a)(3), the permittee shall furnish the Division with written notification of the actual date of initial startup, postmarked within 15 days after such date.
- c. Pursuant to 40 CFR 60.115b(a)(1), the permittee shall furnish the Division with a report that describes the control equipment and certifies that the control equipment meets the specifications of 60.112b(a)(1) and 60.113b(a)(1). This report shall be an attachment to the notification required by 60.7(a)(3).
- d. Pursuant to 40 CFR 60.115b(a)(3), if any of the conditions described in 40 CFR 60.113b(a)(2) are detected during the annual visual inspection required by 40 CFR 60.113b(a)(2), a report shall be furnished to the Division within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
- e. Pursuant to 40 CFR 60.115b(a)(4), after each inspection required by 40 CFR 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 40 CFR 60.113b(a)(3)(ii), a report shall be furnished to the Division within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of 40 CFR 61.112b(a)(1) or 60.113b(a)(3) and list each repair made.

**7. Specific Control Equipment Operating Conditions:**

None

**8. Alternate Operating Scenarios:**

None

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Points - Fugitive****Description:**

<b>Emission Points - Fugitive</b>		<b>Maximum Rated Capacity</b>	<b>Comments</b>
FS01	DDGS Storage Building	22.45 tons/hr 196,629 tons/yr	10 % uncaptured
FS02	Cooling Towers	1,800,000 gallons/hr	None
FS03	Uncaptured Grain Receiving Emissions	560 tons/hr 629,213 tons/yr	10 % uncaptured
FS04	Uncaptured DDGS Loadout Emissions	22.45 tons/hr 196,629 tons/yr	10 % uncaptured
FS06	Truck Traffic	4.5 VMT/hr 39,426 VMT/yr	None
FS07	Wet Cake Storage Area	70.14 tons/hr 614,426.4 tons/yr	None

**APPLICABLE REGULATIONS:**

401 KAR 63:010, *Fugitive Emissions*, is applicable to each affected facility as an apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.

**1. Operating Limitations:**

Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter (PM) from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

- a. Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
- b. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
- c. The maintenance of paved roads in a clean condition; and
- d. The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Compliance will be demonstrated by the good operating procedures listed above and see Subsection 5, *Specific Recordkeeping Requirements*.

**2. Emission Limitations:**

Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

**Compliance Demonstration Method:**

Compliance by good operating procedures, see Subsection 1, *Operating Limitation*.

**3. Testing Requirements:**

None

**4. Specific Monitoring Requirements:**

None

**5. Specific Recordkeeping Requirements:**

- a. The permittee shall maintain records of the calculations to determine the fugitive emission from DDGS storage building, cooling towers, grain receiving, DDGS loadout, paved roads, and wet cake storage area with all data used in the calculations. Emission calculations shall be based on the most current AP-42 emission factors, manufacturer's guarantees, or emission testing.
- b. The permittee shall keep a log of the reasonable precautions taken to prevent particulate matter from becoming airborne on a weekly basis.

**6. Specific Reporting Requirements:**

See Section F, Conditions 5, 6, 7, 8 and 9.

**7. Specific Control Equipment Operating Conditions:**

None

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Point - Fugitive****Description:**

Emission Point - Fugitive		Maximum Rated Capacity	Control Device
FS05	Equipment Leaks	0.00239 tons/hr 20.9364 tons/yr	Subpart VV Control

**APPLICABLE REGULATIONS:**

40 CFR 60 Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*, is applicable to affected facilities in the synthetic organic chemicals manufacturing industry that commences construction or modification after January 5, 1981. The Subpart VV regulates emissions of VOCs from equipment leaks (valves, flanges, pump seals, etc).

**1. Operating Limitations:****Pumps in Light Liquid Service**

- a. (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b), except as provided in 40 CFR 60.482-1(c) and 40 CFR 60.482-2(d), (e), and (f). [40 CFR 60.482-2(a)(1)]  
  
(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. [40 CFR 60.482-2(a)(2)]
- b. (1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-2(b)(1)]  
  
(2) If there are indications of liquids dripping from the pump seal, a leak is detected. [40 CFR 60.482-2(b)(2)]
- c. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-2(c)(1)]  
  
(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. [40 CFR 60.482-2(c)(2)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Valves in Gas/Vapor Service and Valves in Light Liquid Service

- d. Each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485(b) and shall comply with 40 CFR 60.482-7(b) through (e), except as provided in 40 CFR 60.482-7(f), (g), and (h), 40 CFR 60.483-1,2, and 40 CFR 60.482-1(c). [40 CFR 60.482-7(a)]
- e. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. [40 CFR 60.482-7(b)]
- f. (1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. [40 CFR 60.482-7(c)(1)]  
  
(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months. [40 CFR 60.482-7(c)(2)]
- g. (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected, except as provided in 40 CFR 60.482-9. [40 CFR 60.482-7(d)(1)]  
  
(2) A first attempt at repair shall be made no later than 5 calendar day after each leak is detected. [40 CFR 60.482-7(d)(2)]
- h. First attempts at repair include, but are not limited to, the following best practices where practicable:
  - (1) Tightening of bonnet bolts;
  - (2) Replacement of bonnet bolts;
  - (3) Tightening of packing gland nuts;
  - (4) Injection of lubricant into lubricated packing.

**2. Emission Limitations:**

None

**3. Testing Requirements:**

Performance testing for all piping equipment (valves and pumps) shall be conducted within 60 days after achieving the maximum production rate at which the subject equipment will be operated but no later than 180 days after initial startup.



**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

**4. Specific Monitoring Requirements:**

- a. Refer to Subsection 1, *Operating Limitations*.
- b. The permittee shall monitor the amount of raw materials and final products for use in AP-42 emission calculations for pumps and valves in light liquid service and valves in gas/vapor service.

**5. Specific Recordkeeping Requirements:**

All Piping Equipment (Valves and Pumps)

- a. In accordant with 40 CFR 60.7(b), the facility shall maintain records of the occurrence of any startup, shutdown, or malfunction in the operation of all piping equipment.
- b. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following requirements apply: [40 CFR 486(b)]
  - (1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
  - (2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 40 CFR 60.482-7(c) and no leak has been detected during those 2 months.
  - (3) The identification on equipment except on a valve, may be removed after it has been repaired.
- c. When each leak is detected as specified in 40 CFR 60.482-2, 60.482-3, 60.482-7, 60.482-8, and 60.483-2, the following information shall be recorded in a log and shall be kept for 2 years in readily accessible locations: [40 CFR 486(c)]
  - (1) The instrument and operator identification numbers and the equipment identification number.
  - (2) The date the leak was detected and the dates of each attempt to repair the leak.
  - (3) Repair methods applied in each attempt to repair the leak.
  - (4) "Above 10,000" if the maximum instrument reading measured by the methods specified in 40 CFR 60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.
  - (5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
  - (6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- (7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (8) Dates of process unit shutdowns that occur while the equipment is unrepaired.
- (9) The date of successful repair of the leak.
- d. The facility shall develop and maintain a list of identification numbers for equipment subject to 40 CFR Part 60 Subpart VV.
- e. The facility shall maintain a list of identification numbers for equipment that are designated for no detectable emissions as provided at 40 CFR 60.482-2(e) and 40 CFR 60.484-7(f). The designation shall be signed by a facility representative.
- f. The facility shall maintain a list of equipment identification numbers for pressure relief devices.
- g. The facility shall maintain records of the dates of each compliance test as required, the background level measured during each compliance test and the maximum instrument reading measured at the equipment during each compliance test.
- h. The facility shall maintain a list of identification numbers for equipment in vacuum service.
- i. All records required to be kept by this permit shall be maintained on site at the facility for at least two (2) years from the date of record.

**6. Specific Reporting Requirements:**

- a. The facility shall submit semiannual reports to the Division beginning six months after the initial startup date. [40 CFR 60.487(a)]
- b. The initial semiannual report to the Division shall include the following information: [40 CFR 60.487(b)]
  - (1) Process unit identification.
  - (2) Number of valves subject to the requirements of 40 CFR 60.482-7, excluding those valves designated for no detectable emissions under the provisions of 40 CFR 60.482-7(f).
  - (3) Number of pumps subject to the requirements of 40 CFR 60.482-2, excluding those pumps designated for no detectable emissions under the provisions of 40 CFR 60.482-2(e) and those pumps complying with 40 CFR 60.482-2(f).
- c. All semiannual reports to the Division shall include the following information, summarized from the information in 40 CFR 60.486. [40 CFR 60.487(c)]

**SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

- (1) Process unit identification.
- (2) For each month during the semiannual reporting period,
  - (A) Number of valves for which leaks were detected as described in 40 CFR 60.482-7(b) or 60.483-2,
  - (B) Number of valves for which leaks were not repaired as required in 40 CFR 60.482-7(d)(1),
  - (C) Number of pumps for which leaks were detected as described in 40 CFR 60.482-2(b) and (d)(6)(i),
  - (D) Number of pumps for which leaks were not repaired as described in 40 CFR 60.482-2(c)(1) and (d)(6)(ii),
  - (E) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- (3) Dates of process unit shutdowns which occurred within the semiannual reporting period.
- (4) Revision to items reported according to 40 CFR 60.487(b) if changes have occurred since the initial report or subsequent revision to the initial report.
- d. The facility shall report the results of all performance tests to the Division, by reference, 40 CFR 60.8.
- e. See Section F, Conditions 5, 6, 7, 8 and 9.

**7. Specific Control Equipment Operating Conditions:**

None

**8. Alternate Operating Scenarios:**

None

**SECTION C - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:030, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

<b>Description</b>	<b>Generally Applicable Regulation</b>
Production of hot water for on-site personal use.	401 KAR 59:010
Water treatment activities used to provide potable and process water for the plant, excluding any activities associated with wastewater treatment – Reverse Osmosis	401 KAR 59:010
Oxygen de-aeration of water.	401 KAR 59:010
Ventilation exhaust, central chiller water systems, refrigeration, air conditioning, and natural draft hoods or ventilating systems that do not remove air pollutants, equipment, not related to any industrial or production process.	401 KAR 59:010
Wastewater treatment facilities used for domestic sewage only, excluding combustion or including combustion or incineration equipment.	401 KAR 59:010
Laboratory fume hoods or vents used exclusively for chemical or physical analysis.	401 KAR 59:010
Activities associated with the repair and maintenance of paved and unpaved roads, including paving or sealing, or both, of parking lots and roadways.	401 KAR 63:010
Painting, including interior and exterior painting of buildings and solvent use and machinery lubricants and waxes, including oils, greases or other lubricants applied as temporary protective coatings.	401 KAR 59:010
Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both.	401 KAR 59:010
Restrooms and associated cleanup operations and supplies.	401 KAR 59:010
Office supplies and equipment.	401 KAR 59:010
Photocopying equipment and associated supplies.	401 KAR 59:010
Paper shredding.	401 KAR 59:010

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

Equipment used for quality control/assurance or inspection purposed, including sampling equipment used to withdraw materials for analysis.	401 KAR 59:010
Hydraulic and hydrostatic testing equipment.	401 KAR 59:010
Pressurized storage tanks and associated piping for the following: Anhydrous ammonia Liquid natural gas (LNG), Inorganic compounds (Sulfuric Acid and Sodium Hydroxide)	401 KAR 59:010
Emergency electric generators and emergency fire fighting water pump engines (except boilers) rated at 500 hp or less that use only gasoline, natural gas, LP gas or distillate oils, providing no unit is operated more than 500 hours per year verifiable by appropriate records.	401 KAR 59:010
Safety and emergency equipment, except fire pumps, including fire suppression systems and emergency road flares.	401 KAR 59:010
Internal combustion engines rated at 50 hp or less that use only gasoline, diesel fuel, natural gas or LP gas.	401 KAR 59:010
Process safety relief devices installed solely for the purpose of minimizing injury to persons or damage to equipment which could result from abnormal process operating conditions, including the following: Explosion relief vents, diagrams or panels Rupture discs Safety relief valves	401 KAR 59:010
Activities and equipment associated with on-site medical care not otherwise specifically regulated.	401 KAR 59:010
Air compression and pneumatically operated equipment, including hand tools.	401 KAR 59:010
Compressor or pump lubrication and seal oil systems.	401 KAR 59:010
Construction and demolition areas.	401 KAR 63:010
Road salting and sanding.	401 KAR 63:010
Natural gas-fired combustion sources with heat input equal or less than 10 million (10,000,000) Btu/hr.	401 KAR 59:015 or 61:015

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

Indirect heat exchangers or water heaters rated at 1 million (1,000,000) Btu per hour or less actual heat input that use #2 fuel oil, wood, natural gas, LP gas or refinery fuel gas.	401 KAR 59:010
Distillate oil-fired space heaters or ovens rated at less than 2 million (2,000,000) Btu per hour actual heat input, providing the maximum sulfur content is less than 0.5% by weight, verifiable by appropriate records.	401 KAR 59:010
Residual oil-fired space heaters or ovens rated at less than 300,000 Btu per hour actual heat input, providing the maximum sulfur content is less than 3.8% by weight, verifiable by appropriate records.	401 KAR 59:010
Gas fired space heaters or ovens rated at less than 1 million (1,000,000) Btu per hour actual heat input.	401 KAR 59:010
Pressurized storage vessels containing petroleum or volatile organic liquids that are designed to operate in excess of 204.9 kPa with no emissions to the ambient air.	401 KAR 59:010
Storage vessels having less than 10,567 gallons capacity that contain petroleum or organic liquids with a vapor pressure of 1.5 psia or less at storage temperature.	401 KAR 59:010
Storage vessels having less than 10,567 gallons capacity that contain petroleum or organic liquids with a vapor pressure greater than 1.5 psia at storage temperature providing those vessels having more than 580 gallons capacity are equipped with a permanent submerged fill pipe.	401 KAR 59:010
Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.	401 KAR 59:010
Machining of metals, providing total solvent usage at the source for this activity does not exceed 60 gallons per month.	401 KAR 59:010
Solvent recycling systems with batch capacities less than or equal 100 gallons.	401 KAR 59:010
Noncontact cooling tower systems with either of the following: Natural draft cooling towers not regulated under a NESHAP	None
Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtrations equipment.	401 KAR 59:010
Heat exchanger cleaning and repair.	401 KAR 59:010
Process vessel degassing and cleaning to prepare for internal repairs.	401 KAR 59:010

**SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

Paved and unpaved roads with parking lots with public access.	401 KAR 63:010
Blowdown for any of the following: Sight glass Boiler Compressors Pumps Cooling Tower	401 KAR 59:010
Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grain per actual cubic foot and gas flow rate of less than or equal to 4,000 actual cubic feet per minute, including the following: Deburring Buffing Polishing Abrasive blasting Pneumatic conveying Woodworking operations	401 KAR 59:010

**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS**

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. PM, SO<sub>2</sub>, HAP, and visible fugitive dust emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.
3. Source-Wide Limitations on Potential to Emit
  - a. To preclude the applicability of 401 KAR 50:020, Title V permits, the total annual emissions from the source shall not exceed the emission limits listed in Table 1, based on a rolling 12-month total emission basis.

**Table 1**  
**Source-Wide Emission Limits**

<b>Pollutant</b>	<b>Emission Limit (rolling 12-month total)</b>
Total PM	90
PM <sub>10</sub>	90
SO <sub>2</sub>	90
NO <sub>x</sub>	90
CO	90
VOC	90
Each Individual HAP	9
Total HAP	22.5

**Compliance Demonstration Method:**

Compliance shall be determined by calculating and recording monthly emission rates and rolling 12-month total emissions.

- b. The permittee shall calculate and record quarterly actual monthly emissions and total emissions for the previous 12-month period for the emission units listed in this permit. In place of actual emission rates, the permittee may use worst-case emission rates.
- c. The permittee shall retain documentation of emission calculations on site for a minimum of 5 years. The documentation shall be made available for inspection by the Division or U.S. EPA upon request.



**SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)**

4. Pursuant to 401 KAR 63:020, Section 3, persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

**Compliance Demonstration Method:**

Refer to Section E and Section F.9.

## **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place (as defined in this permit), and time of sampling or measurements;
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:030 Section 3(1)(f)1a and Section 1a-7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
3. In accordance with the requirements of 401 KAR 52:030 Section 3(1)f the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit;
  - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030, Section 26].

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:030 Section 22. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
9. Pursuant to 401 KAR 52:030, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit in accordance with the following requirements:
  - a. Identification of each term or condition;
  - b. Compliance status of each term or condition of the permit;
  - c. Whether compliance was continuous or intermittent;
  - d. The method used for determining the compliance status for the source, currently and over the reporting period.
  - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

**SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)**

- f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality  
Owensboro Regional Office  
3032 Alvey Park Dr. W., Suite 700  
Owensboro, KY 42303

Division for Air Quality  
Central Files  
803 Schenkel Lane  
Frankfort, KY 40601

10. In accordance with 401KAR 52:030, Section 3(1)(d), the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee. If a KYEIS emission survey is not mailed to the permittee, then the permittee shall comply with all other emission reporting requirements in this permit.
11. The Cabinet may authorize the temporary use of an emission unit to replace a similar unit that is taken off-line for maintenance, if the following conditions are met:
- a. The owner or operator shall submit to the Cabinet, at least ten (10) days in advance of replacing a unit, the appropriate Forms DEP7007AI to DD that show:
    - (1) The size and location of both the original and replacement units; and
    - (2) Any resulting change in emissions;
  - b. The potential to emit (PTE) of the replacement unit shall not exceed that of the original unit by more than twenty-five (25) percent of a major source threshold, and the emissions from the unit shall not cause the source to exceed the emissions allowable under the permit;
  - c. The PTE of the replacement unit or the resulting PTE of the source shall not subject the source to a new applicable requirement;
  - d. The replacement unit shall comply with all applicable requirements; and
  - e. The source shall notify Regional office of all shutdowns and start-ups.
  - f. Within six (6) months after installing the replacement unit, the owner or operator shall:
    - (1) Re-install the original unit and remove or dismantle the replacement unit; or
    - (2) Submit an application to permit the replacement unit as a permanent change.

**SECTION G - GENERAL PROVISIONS****1. General Compliance Requirements**

- a. The permittee shall comply with all conditions of this permit. A noncompliance shall be a violation of 401 KAR 52:030 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to the termination, revocation and reissuance, revision, or denial of a permit [Section 1a-2 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-5 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:030 Section 18. The permit will be reopened for cause and revised accordingly under the following circumstances:
  - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:030 Section 12;
  - (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
  - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 6 and 7 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:030 Section 3(1)(c)].

**SECTION G - GENERAL PROVISIONS (CONTINUED)**

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:030 Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-12-b of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038 Section 3(6) [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:030 Section 11(3)].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing Federally-Enforceable Permits for Non-Major Sources* incorporated by reference in 401 KAR 52:030 Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry.
- o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders.

## **SECTION G - GENERAL PROVISIONS (CONTINUED)**

- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:030, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
  - (1) Applicable requirements that are included and specifically identified in this permit; and
  - (2) Non-applicable requirements expressly identified in this permit.

### **2. Permit Expiration and Reapplication Requirements**

- a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:030 Section 12].
- b. The authority to operate granted through this permit shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:030 Section 8(2)].

### **3. Permit Revisions**

- a. Minor permit revision procedures specified in 401 KAR 52:030 Section 14(3) may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:030 Section 14(2).
- b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.



**SECTION G - GENERAL PROVISIONS (CONTINUED)****4. Construction, Start-Up, and Initial Compliance Demonstration Requirements**

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
  - (1) The date when construction commenced.
  - (2) The date of start-up of the affected facilities listed in this permit.
  - (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:030, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the final permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.
- f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

**SECTION G - GENERAL PROVISIONS (CONTINUED)****5. Testing Requirements**

- a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.
- b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

**6. Acid Rain Program Requirements**

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

**7. Emergency Provisions**

- a. Pursuant to 401 KAR 52:030 Section 23(1), an emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
  - (1) An emergency occurred and the permittee can identify the cause of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
  - (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two (2) working days of the time when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.

## SECTION G - GENERAL PROVISIONS (CONTINUED)

- (5) Notification of the Division does not relieve the source of any other local, state or federal notification requirements.
  - b. Emergency conditions listed in General Provision G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:030 Section 23(3)].
  - c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:030 Section 23(2)].
8. Ozone depleting substances
- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
    - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
    - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
    - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
    - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
    - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
    - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
  - b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.
9. Risk Management Provisions
- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:  
  
RMP Reporting Center  
P.O. Box 1515  
Lanham-Seabrook, MD 20703-1515.
  - b. If requested, submit additional relevant information to the Division or the U.S. EPA.

**SECTION H - ALTERNATE OPERATING SCENARIOS**

None

**SECTION I - COMPLIANCE SCHEDULE**

None

**SECTION J - ACID RAIN**

None